

FIG. 1

097223-10501
10501-222660

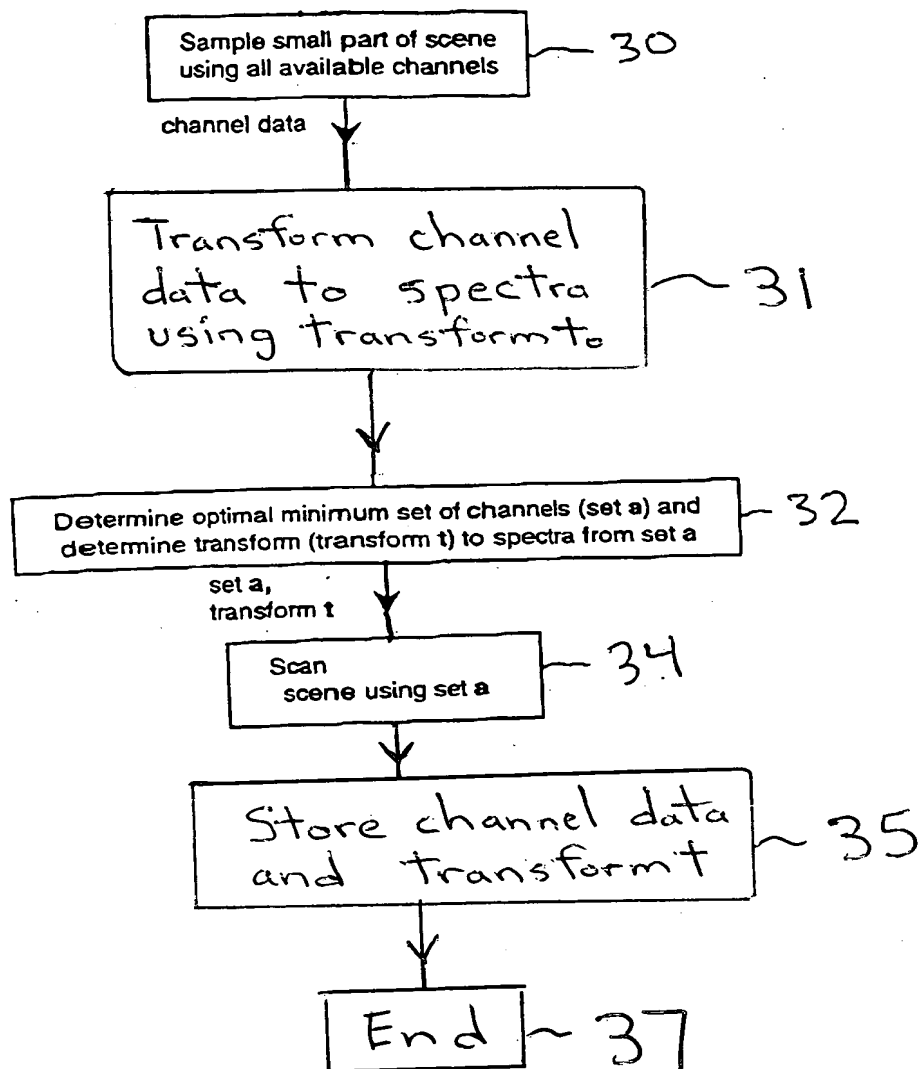


FIG. 2

09/22/60

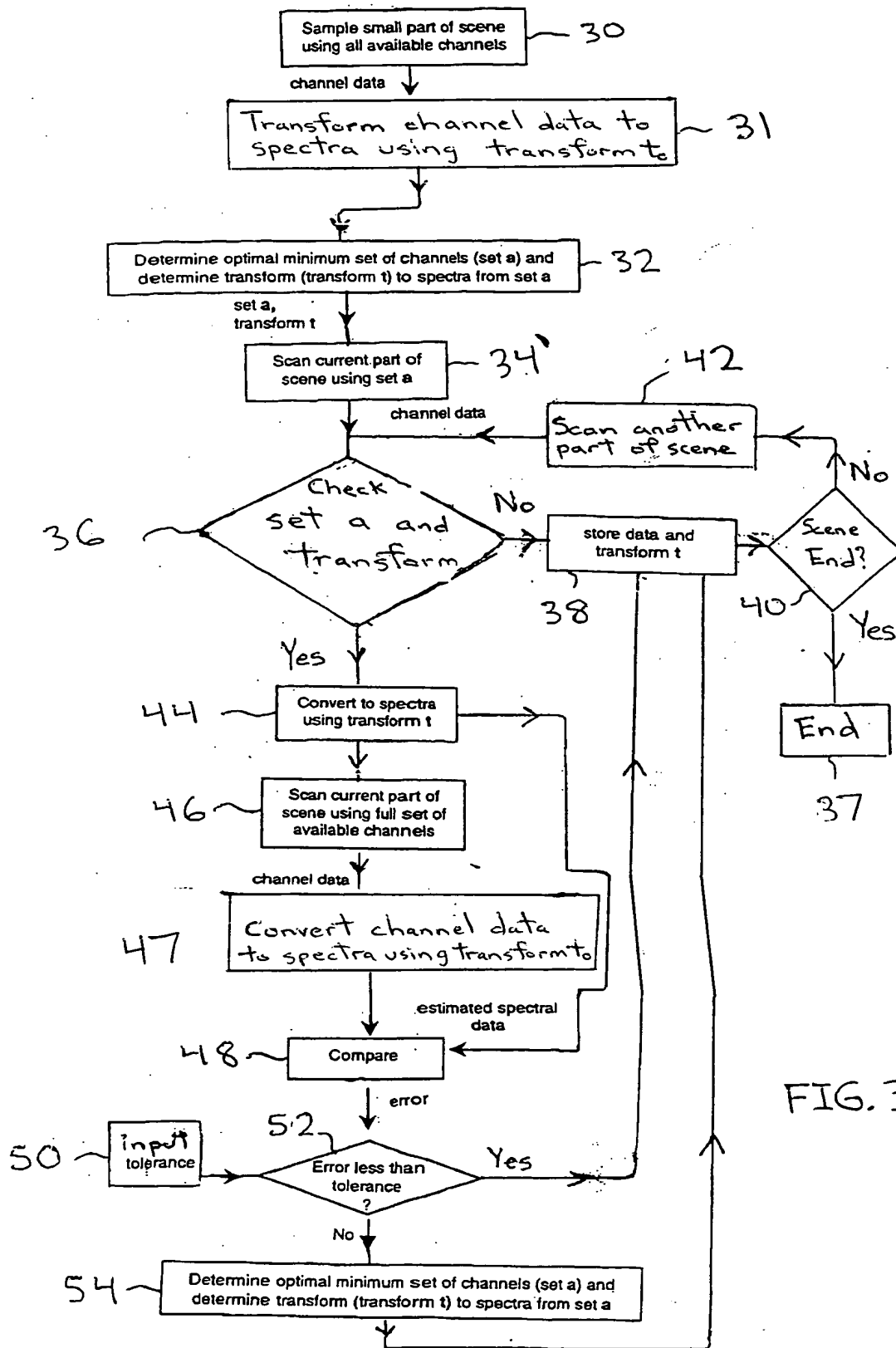


FIG. 3

```

graph TD
    30[Sample small part of scene using all available channels from the secondary imaging system] -- channel data --> 31[Transform channel data to spectra using transforms]
    31 --> 32[Determine optimal minimum set of channels (set a) and determine transform (transform t) to spectra from set a from the secondary imaging system]
    32 -- set a, transform t --> 34[Scan scene using set a and primary imaging system]
    34 -- channel data --> 36{Check set a and transform}
    36 -- No --> 38[store data and transform t]
    36 -- Yes --> 44[Convert to spectra using transform t]
    44 --> 46[Scan part of scene using full set of available channels from the secondary imaging system]
    46 --> 47[Convert channel data to spectra using transforms]
    47 -- estimated spectral data --> 48[Compare]
    48 -- error --> 52{Error less than tolerance?}
    50[Input tolerance] --> 52
    52 -- Yes --> 38
    52 -- No --> 54[Determine optimal minimum set of channels (set a) and determine transform (transform t) to spectra from set a]
    54 --> 32
    38 --> 42[Continue scan of scene]
    42 --> 40{Scene End?}
    40 -- No --> 36
    40 -- Yes --> 41[End]
  
```

FIG. 4

09072223.100504

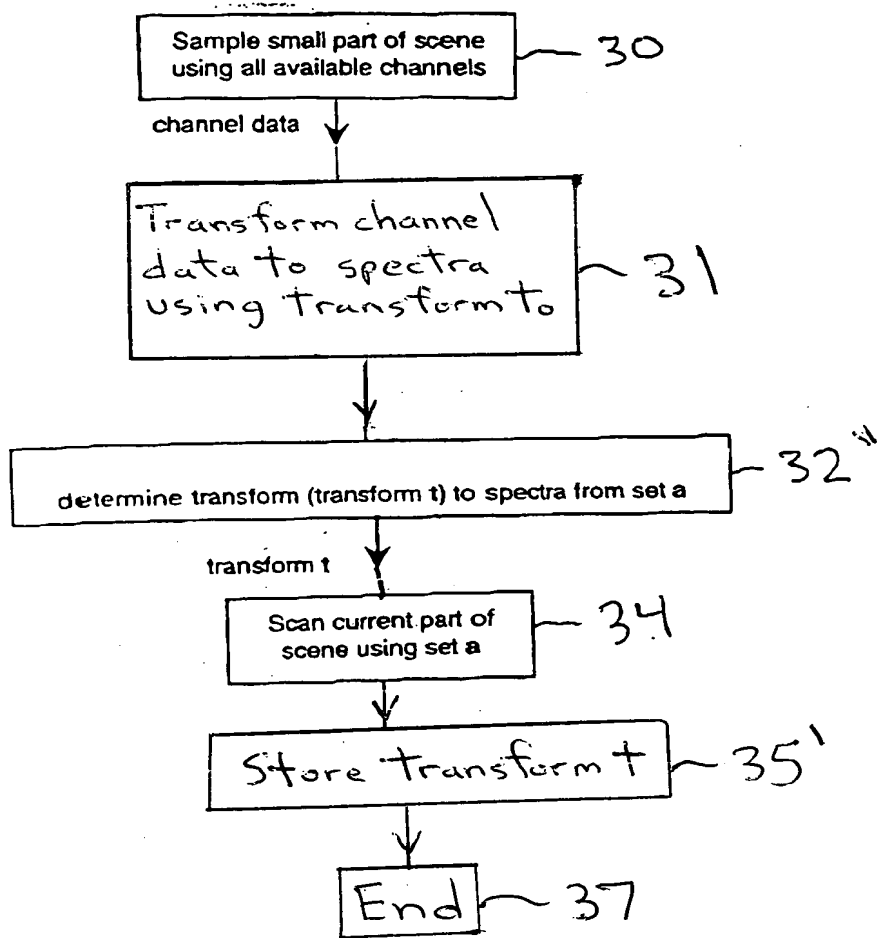


FIG. 5